KOSHKIN, V.G., kand. tekhn. nauk; MAKOTINSKIY, M.P., kand. arkh.; MUNTS, V.O., kand. arkh.; RUDINA, M.A., arkh.; SILUANOVA, G.V., arkh.; SHORYGINA, N.V., kand. khim. nauk. Prinimali uchastiye: BOGUSLAVSKIY, A.I., inzh.; ZARUBITSKIY, A.Ye., inzh.; LIVSHITS, A.M., inzh.; MASHINA, N.N., inzh.; OTLIVANCHIK, A.N., kand. tekhn. nauk; ROMANOVA, L.A., inzh.; CHERKINSKIY, Yu.S., inzh.; ANDREYEV, V.S., retsenzent; IOFAN, B.M., retsenzent; KRIPPA, A.I., arkh., retsenzent; GURVICH, E.A., red. izd-va; BRUSINA, L.N., tekhn. red.

[Catalog of finishing materials and articles] Katalog otdelochnykh materialov i izdelii. Pod red. M.P.Makotinskogo. Moskva, Gosstroiizdat. Pt.1.[Plastics; polymer finishing materials and articles] Plastmassy; polimernye otdelochnye materialy i izdeliia. 1962. 119 p. (MIRA 16:4)

1. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut novykh stroitel'nykh materialov. 2. Chlen-korrespondent Akademii stroitel'stva i arkhitektury SSSR (for Andreyev, Iofan, Krippa).
(Finishes and finishing--Catalogs) (Plastics)

KOSHKIN, V.G., kand.tekhn.nauk; LARKINA, V.I., inzh.

Polyvinyl acetate mastic compounds of increased quality for laying seamless floor coverings. Stroi. mat. 9 no.2:17-18 F '63. (MIRA 16:2)

(Mastics) (Floor coverings)

MOISEYENKO, A.T., inzh.; MOSKALEV, N.M., kand. tekhn. nauk; KOSHKIN, V.G., kand. tekhn. nauk; MKERVALI, O.P., inzh., red.; D'YACHKOV, G.D., inzh., red.; YEVDOKIMOV, V.M., inzh., red.; STRASHNYKH, V.P., red. izd-va; MOLCHALINA, Z.S., tekhn. red.; BOROVNEV, N.K., tekhn. red.

[Construction specifications and regulations] Stroitel'nye normy i pravila. Moskva, Gosstroiizdat. Pt.1. Sec.B. ch.3. [Fundations and supports of piles and cylindrical shels; precast construction (SNiP I-B.3-62)] Fundamenty i opory iz svai i tsilindricheskikh obolochek; sbornye konstruktsii SNiP I-B.3-62). 1963. 7 p. Pt.1. Sec.V. ch.15.[Polymer-base materials and products (SNiP I-V.15-62)] Materialy i izdeliia na osnove polimerov (SNiP I-V.15-62). 1963. 26 p. (MIRA 16:6)

1. Russia (1923- U.S.S.R.) Gosudarstvennyy komitet po delam stroitel'stva. 2. Gosstroy SSSR (for Mkervali, Moiseyenko). 3. Mezhduvedomstvennaya komissiya po peresmotru stroitel'nykh norm i pravil (for D'yachkov, Moskalev). 4. Gosudarstvennyy institut po proyektirovaniyu osnovaniy i fundamentov "Fundamentproyekt" Ministerstva stroitel'stva RSFSR (for Yevdokimov). 5. Vsesoyuznyy nauchno-issledovatel'skiy institut novykh stroitel'nykh materialov Akademii stroitel'stva i arkhitektury SSSR (for Koshkin).

(Concrete piling) (Polymers)

NIKOL'SKIY, V.N., kand. tekhn. nauk; SPIVAK, N.Ya., kand. tekhn. nauk; BAULIN, D.K., inzh.; BUADZE, V.Sh., inzh.; KREYTAN, V.G., kand. tekhn. nauk; PERMYAKOV, S.I., kand. tekhn. nauk; USOV, A.L., inzh.; KOSHKIN, V.G., kand. tekhn. nauk; MARAVIN, B.L., inzh.; ERENBURG, A.I., inzh.; KOCHESHKOV, V.G., inzh.; RUBANENKO, B.R., glav. red.; ROZANOV, N.P., zam. glav. red.; ONUFRIYEV, I.A., red.; YUDIN, Ye.Ya., red.; NASONOV, V.N., red.; ISIDOROV, V.V., red.; MAKARICHEV, V.V., red.; FINKINSHTEYN, B.A., inzh. red.;

[Prefabricated floor and ceiling structures] Poly i perekrytiia industrial'noi konstruktsii. Moskva, Gosstroiizdat, 1963. 71 p. (MIRA 16:12).
1. Akademiya stroitel'stva i arkhitektury SSSR. TSentral'nyy nauchno-issledovatel'skiy i eksperimental'no-proyektnyy institut industrial'nykh zhilykh i massovykh kul'turno-bogatykh zdaniy. 2. Nauchno-issledovatel'skiy institut stroitel'noy fiziki i ograzhdayushchikh konstruktsii (for Nikol'skiy, Usov). 3. TSentral'nyy nauchno-issledovatel'skiy i eksperimental'no-proyektnyy institut industrial'nykh zhilykh i massovykh kul'turno-bogatykh zdaniy (for Buadze, Baulin, Spivak, Kreytan, Kocheshkov). 4. Vsesoyuznyy nauchno-issledovatel'skiy institut novykh stroitel'nykh materialov Akademii stroitel'stva i arkhitektury SSSR (for Erenburg).
(Floors) (Ceilings)

KOSHKIN, Viktor Gavrilovich; CHERKINSKIY, Yuliy Samuilovich;
LARKINA, Vera Ivanovna; ISAKOVICH, Grigoriy Aleksandrovich;
SLIPCHENKO, Galina Fedorovna; BELOVA, Aleksandra Panteleymonovna;
GURVICH, E.A., red.izd-va; SHERSTNEVA, N.V., tekhn. red.

[Synthetic materials for floor coverings in industrial buildings] Sinteticheskie materialy dlia pokrytii polov promyshlennykh zdanii. [By] V.G.Koshkin i dr. Moskva, Gosstroiizdat, 1963. 128 p. (MIRA 17:2)

KOSHKIN, V.G., kand. tekhn. nauk; BORISOV, I.L., inzh.; STOROZHENKO, V.P., inzh.-ekonomist

Prospects for using polymer finishing, heat insulating, soundproofing, waterproofing, and sealing materials in the construction industry. Sbor. trud. VNIINSM no.7:3-13 '63.

(MIRA 17:11)

FADEYEVA, V.S., doktor tekhn. nauk; KOSHKIN, V.G., kand. tekhn. nauk;
MANDRUKOVA, V.I., inzh.

Extrusion of building fittings. Sbor. trud. VNIINSM no.8:
5-16 '63. (MIRA 17:9)

KOSHKIN, V.G.; GORBUNOVA, A.A.; KONSTANTINOVA, M.A.; GUZMAN,
M.A., red.

[Polymer strip-type parts for buildings; their manufacture and use] Polimernye pogonazhnye izdeliia dlia stroitel'stva; proizvodstvo i primenenie. Moskva, Stroiizdat, 1964. 99 p.
(MIRA 17:7)

VOROB'YEV, Vasiliy Aleksandrovich, zasl. deyatel' nauki i tekhniki doktor tekhn. nauk prof.; Prinimali uchastiye: FEDOSEYEV, G.P., kand. tekhn. nauk, dots.; ANDRIANOV, R.A., kand. tekhn. nauk; KOSHKIN, V.G., nauchn. sotr., kand. tekhn. nauk retsenzent; MARTYNOV, A.P., red.

[Principles of the technology of plastic building materials] Osnovy tekhnologii stroitel'nykh materialov iz plasticheskikh mass. Moskva, Vysshaia shkola, 1965. 323 p.
(MIRA 18:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut novykh stroitel'nykh materialov (for Koshkin).

KOSHKIN, Viktor Gavrilovich, kand. tekhn. nauk; ERENBURG, Aleksandr Isaakovich; DANTSIN, Matvey Isaakovich, inzh.; SHTOFENMAKHER, Berta Moiseyevna, inzh.; ZOKHIN, Grigoriy Iosifovich

[Polyvinyl chloride linoleum on a felt base used for heat and sound insulation; practices of the Mytishchi Combine for Synthetic Building Materials and Products] Polivinilkhloridnyi linoleum na teplo- i zvukoizoliatsionnoi voilochnoi osnove; opyt Mytishchinskogo kombinata sinteticheskikh stroitel'nykh materialov i izdelii. Moskva, Stroiizdat, 1964. 16 p. (MIRA 18:5)

1. Zamestitel' direktora Vsesoyuznogo nauchno-issledovatel'skogo instituta novykh stroitel'nykh materialov (for Koshkin). 2. Glavnyy inzhener laboratorii Vsesoyuznogo nauchno-issledovatel'skogo instituta novykh stroitel'nykh materialov (for Erenburg). 3. Rukovoditel' laboratorii Nauchno-issledovatel'skogo instituta zhelezobetonnykh izdeliy, stroitel'nykh i nerudnykh materialov Glavnogo upravleniya promyshlennosti stroitel'nykh materialov i stroitel'nykh detaley (for Dantsin). 4. Glavnyy tekhnolog laboratorii Nauchno-issledovatel'skogo instituta zhelezobetonnykh izdeliy, stroitel'nykh i nerudnykh materialov Glavnogo upravleniya promyshlennosti stroitel'nykh materialov i stroitel'nykh detaley (for Shtofenmakher). 5. Direktor Mytishchinskogo kombinata sinteticheskikh stroitel'nykh materialov i izdeliy(for Zokhin).

KOSHKIN, V.G.; CHERKINSKIY, Yu.S.; LARKINA, V.I.; SHCHAVELEVA, N.A.;
SLIPCHENKO, G.F.

Seamless mastic and polymer-cement floors. Prom. stroi. 43
no.11:17-20 '65. (MIRA 18:12)

KOSHKIN, V.G., kand. tekhn. nauk; LARKINA, V.I., inzh.

Coverings on the basis of epoxy resins for floors of industrial buildings. Stroi. mat. no.11:31 N '65. (MIRA 18:12)

KOSHKIN, V. I.

"Industrial Trauma in the Mines of a Polymetallic Combine." Cand Med Sci, Inst of Clinical and Experimental Surgery, Acad Kazakh SSR, Alma-Ata 1953. (RZhKhim, No 1, Jan 55)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (12)
SO: Sum. No. 556, 24 Jun 55

KOSHKIN, V. I.

6334. Materialy K Kharkteristike Proizvodstennogo Travmatizma Na Rudnikakh Polimetallicheskogo Kombinata. Alma-Ata, 1954. Ss. 22sm. (In-T Fiziologii, In-T Krayev, Patologii. In-T Klinich. I Eksperim. Khirurgii Akad. Nauk Kazakh. SSR.) 100 Ekz. B. Ts. - (S4-58158)

SO: Knizhanya Letopis' 1, 1955

KOSHKIN, V. I.

TKACHENKO, G.K.; KOSHKIN, V.I.

Sleep therapy in the compound treatment of some simple craniocerebral injuries. Trudy Inst. klin. i eksp. khir. AN Kaz. SSR 1:102-109 '54 (MLRA 10:5)

1. Iz Instituta klinicheskoy i eksperimental'noy khirurgii Akademii nauk Kazakhskoy SSR.
(SLEEP--THERAPEUTIC USE) (BRAIN--WOUNDS AND INJURIES)
(SKULL--WOUNDS AND INJURIES)

KOSHKIN, V.I.

LEVCHENKO, S.N.; KOSHKIN, V.I.

Characteristic of agricultural injuries occurring in land reclamation regions. Trudy Inst.klin. i eksp.khir. AN Kazakh.SSR 3:140-147 '57.
(MLRA 10:8)

1. Institut klinicheskoy i eksperimental'noy khirurgii Akademii nauk Kazakhskoy SSR
(KAZAKHSTAN--AGRICULTRURE--ACCIDENTS)

USSR / Diseases of Farm Animals. General Problems. R

Abs Jour : Ref Zhur - Biologiya, No 2, 1959, No. 7425

Author : Koshkina, V. I. +
Inst : Alma-Ata Zooveterinary Institute
Title : The Reaction of the Organism of Animals to the Introduction of Hemosporidine and Piroplasmine

Orig Pub : Tr. Alma-Atinsk. zoovet. in-ta, 1957, 10, 185-188

Abstract : After a 1 percent solution of piroplasmin was subcutaneously introduced to sheep in a 3 mg/kg dose, restlessness, increased pulse and respiration rates, shortness of breath, salivation and increased peristalsis were observed. After the preparation was introduced in a 2 mg/kg dose, a decrease of leukocyte quantity, sugar, reserve alkalinity and an increase of chlorides in the blood were observed within the first few hours. Four hours, sometimes 6 hours after injection, an

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+ Chair of Parasitology

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USSR / Diseases of Farm Animals. General Problems. R

Abs Jour : Ref Zhur - Biologiya, No 2, 1959, No. 7425

increase of the leukocyte quantity and sugar were observed as well as a relatively high level of reserve alkalinity and chlorides. Usually, the leukocyte quantity returned to normal after 24 hours. The reaction of the organism to subcutaneous injection of hemosporidin to sheep in 0.5, 2, 1.5 mg/kg doses varied depending upon the dosage. An increase of leukocyte quantity was observed 6 - 8 hours after a medicinal dose was injected, and a decrease after 48 hours. -- A. D. Musin

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KOSHKIN, V.I.

**KOSHKIN, V.I.**, dotsent

Use of local anesthesia according to A.V. Vishnevskii's method in concervative resection of the knee joint in tuberculous gonitis. Khirurgiia 37 no.4:96-98 '61. (MIRA 14:4)

1. Iz kafedry operativnoy khirurgii i topograficheskoy anatomii (zav. - dotsent V.I. Koshkin) Semipalatinskogo meditsinskogo instituta.

(LOCAL ANESTHESIA) (KNEE—SURGERY)

KOSHKIN, V.I., dotsent

Conference on osteoarticular tuberculosis. Zdrav.Kazakh. 22 no.6:72-74 '62. (MIRA 15:11)
(BONES--TUBERCULOSIS) (JOINTS--TUBERCULOSIS)

KOSHKIN, V.I., dotsent (Semipalatinsk, ul.Zhdanova, d.61.kv.26)

Abstracts of articles received by the editors. Ortop., travm.i protez. 24 no.9:52-53 S '63. (MIRA 17:4)

1. Iz Instituta klinicheskoy i eksperimental'noy khirurgii AN Kazakhskoy SSR (dir. - akademik AN Kazakhskoy SSR prof. A.N.Syzganov) i Semipalatinskogo meditsinskogo instituta (rektor - dotsent K.Ch.Chuvakov).

KOSHKIN, V. K., Docent

"Dynamics of the Combustion Process in a High-Speed Diesel." Sub 23 Jun 47, Moscow Order of Lenin Aviation Inst imeni Sergo Ordzhonikidze

Dissertations presented for degrees in science and engineering in Moscow in 1947

SO: Sum No. 457, 18 Apr 55

Koshkin, V. K.

INOZEMTSEV, N. V., and V. K. KOSHKIN.

Protsessy sgoraniia v dvigateliakh; pod obschei red. N. V. Inozemtseva. Moskva, Mashgiz, 1949. 344p., diagrs.

At head of title: Moskovskii ordena Lenina aviatsionnyi institut imeni Sergo Ordzhonikidze.

Bibliography: p.342-343.

Title tr.: Processes of combustion in engines.

TJ759. I 58

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955.

Fuel Abstracts

[illegible] Prime Movers
[illegible]

KOSHKIN, V.K.

4741. MECHANISM OF COMBUSTION IN SPARK IGNITION ENGINES. Koshkin, B.K. (Izv. Akad. Nauk SSSR, Otdel. Tekh Nauk (Bull Acad. Sci. U.S.S.R. Sect. Tech. Sci.) July 1952, 1117-1121). The three phase theory of combustion further criticized, largely on the ground that conditions in their test engine were quite different from those met in practice.

KOSHKIN, V.K., doktor tekhnicheskikh nauk, professor; LEVIN, B.R., kandidat tekhnicheskikh nauk; PUL'MANOV, N.V., kandidat tekhnicheskikh nauk, retsenzent; POPOVA, S.M., tekhnicheskiy redaktor

[Free-piston engines] Dvigateli so svobodno dvizhushchimisia porshniami. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1954. 175 p. [Microfilm] (MLRA 7:10)

(Gas and oil engines)

KosHKin, V.K.

632. FREE-PISTON ENGINES IN THERMAL POWER PLANTS. (DVIGATELI SO SVOBODNO DVIZHUSHCHIMISYA PORSHNYAMI V TEPLOSILOVYKH USTANOVKAKH). Koshkin V.K. et al. (Moscow: Mashgiz, 1957. 180pp., 8s.; title in Collet's Foreign Bk News, Sept. 1957, (15b), 6).

KOSHKIN, Valentin Konstantinovich, professor; LEVIN, Boris Ruvimovich; KUTYRIN, Igor' Nikolayevich; BORISOV, Boris Petrovich; PORTNOV, D.A., doktor tekhnicheskikh nauk, retsenzent; LUSHPA, A.I., kandidat tekhnicheskikh nauk, redaktor; UVAROVA, A.F., tekhnicheskiy redaktor

[Free-piston engines in heat power plants] Dvigateli so svobodno dvizhushchimisia porshniami v teplosilovykh ustanovkakh. Pod red. V.K.Koshkina. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1957. 227 p.
(MLRA 10:6)
(Gas turbines) (Gas and oil engines) (Pistons)

KosHKin, V.K.

88-92-2/9

AUTHOR: Koshkin, V. K., Doctor of Technical Sciences, Professor

TITLE: Investigation of the Combustion Process in a Carburetor Engine by the Ionization Method (Issledovaniye protsessa sgoraniya v karbyuratornom dvigatele ionizatsionnym metodom)

PERIODICAL: Trudy Moskovskogo aviatsionnogo instituta, 1957, Nr 92: The Working Process in Internal-combustion Engines (Rabochiy protsess v dvigatelyakh vnutrennego sgoraniya) pp. 5-30 (USSR)

ABSTRACT: The author states that the main purpose of this study is to improve the efficiency of newly constructed heat engines. He states that the actual mechanism of the combustion process in various kinds of engines is still subject to considerable investigation due to complexity of the process. The problem is under study and new experimental data are being collected. It is now generally held that the combustion process in carburetor engines is characterized by the simultaneous combination of the processes of fuel-molecule oxidation with the phenomena of flame-front propagation. The author, together with Inozemtsev, N. V., in their work "Combustion Processes in Engines" (Processy sgoraniya v dvigatelyakh, Mashgiz 1949),

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Investigation of the Combustion Process in Carburetor (Cont.) 88-92-2/9

determined the velocity of flame propagation and thetransformations on the front of the flame. However, because of the importance reliability in determining combustion characteristics, the author presents in this article a new method of verification by ionization. He describes the experimental plant and the instruments and apparatus used, and lists the values measured together with the results obtained. There are 17 references, 5 of which are Soviet (including 3 translations), 4 English, 5 German.

AVAILABLE: Library of Congress

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1. Internal combustion engines-Test results
2. Internal combustion engines-Performance
3. Combustion chamber gases-Ionization
4. Gas ionization-Test results

IMS/wde
7/10/58

PUL'MANOV, Nikolay Viktorovich; KOSHKIN, V.K., prof., doktor tekhn.nauk, retsenzent; BLIZNYANSKIY, S.A., inzh., red.; DANILOV, L.N., red.izd-va; SOKOLOVA, T.F., tekhn.red.

[Diesel compressors with free pistons] Dizel'-kompressory so svobodno dvizhushchimisia porshniami. Moskva, Gos.nauchno-tekhn. izd-vo mashinostroit.lit-ry, 1959. 283 p. (MIRA 12:11)
(Air compressors) (Diesel engines)

KOSHKIN, V K.

PHASE I BOOK EXPLOITATION SOV/5405

Avduyevskiy, Vsevolod Sergeyevich, Yuriy Ivanovich Danilov, Valentin Konstantinovich Koshkin, Professor, Igor' Nikolayevich Kutyrin, Militsa Mitrofanovna Mikhaylova, Yuriy Sergeyevich Mikheyev, and Oleg Sergeyevich Sergel'

Osnovy teploperedachi v aviatsionnoy i raketnoy tekhnike (Principles of Heat Transfer in Aeronautic and Rocket Engineering) Moscow, Oborongiz, 1960. 388 p. Errata slip inserted. 8,800 copies printed.

Sponsoring Agency: Ministerstvo vysshego i srednego spetsial'nogo obrazovaniya RSFSR.

Gen. Ed. (Title page): V. K. Koshkin, Professor; Ed. (Inside book): A. S. Ginevskiy, Candidate of Technical Sciences; Ed. of Publishing House: E. A. Shekhtman; Tech. Ed.: V. P. Rozhin; Managing Ed.: A. S. Zaymovskaya, Engineer.

PURPOSE: This textbook is intended for students in aeronautical

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Principles of Heat (Cont.) SOV/5405

schools of higher technical education. It may also be useful to engineering and technical personnel and aspirants specializing in aircraft and rocket heat-exchange problems.

COVERAGE: The book presents the fundamental problems of heat exchange in modern aircraft and rocket engineering. Data were taken from both Soviet and non-Soviet sources. Problems of high-speed and high-temperature gas flow in the presence of chemical reactions in the boundary layer are discussed, and hydrodynamic methods of heat protection of surfaces and heating problems in winged flying vehicles are included. Attention is given to principles of heat exchange in rarefied gases and in nuclear power reactors. No personalities are mentioned. Chapters VIII to XV are based on non-Soviet literature. Chs. I and II were written by Professor V. K. Koshkin, Ch. III by Docent M. M. Mikhaylova, Ch. IV by Docent O. S. Sergel', Chs. V and VI by Docent Yu. S. Mikheyev, Ch. VII by Docent I. N. Kutyrin, Chs. VIII to XVI by Docent V. S. Avduyevskiy, and Ch. XVII by Docent Yu. I. Danilov.

Card 2/20

PORTNOV, D.A., doktor tekhn. nauk, prof.; KOSHKIN, V.K., doktor tekhn. nauk, prof., retsenzent; ORLIN, A.S., doktor tekhn. nauk, prof., retsenzent; POGODIN, S.I., kand. tekhn. nauk, red.; ZYUZIN, N.M., red. izd-va; EL'KIND, V.D., tekhn. red.

[High-speed piston and turbine engines with compression ignition; theory, operation, and characteristics] Bystrokhodnye turboporshnevye dvigateli s vosplameneniem ot szhatiia; teoriia, rabochii protsess i kharakteristiki. Moskva, Mashgiz, 1963. 638 p. (MIRA 16:7)

(Internal combustion engines)

KOSHKIN, V.K., doktor tekhn. nauk, red.

[Study of heat transfer in liquid and gas flows] Issledovanie teploobmena v potokakh zhidkosti i gaza. Moskva, Mashinostroenie, 1965. 173 p. (MIRA 18:3)

L 54053-65 EWT(1)/EWT(m)/EPF(c)/EPF(n)-2/ENG(m)/EPR/EWP(j) Pc-4/Pr-4/Ps-4/
Pi-4/Pu-4 RPL WW/JW/GS/RM

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ACCESSION NR: AT5010479 UR/0000/65/000/000/0003/0028

AUTHOR: Koshkin, V. K. (Doctor of technical sciences); Kuznetsov, V. V. (Engineer); Kutyrin, I. N. (Candidate of technical sciences); Lapushkin, N. A. (Candidate of technical sciences) (Deceased)

TITLE: Use of the endothermic coolant decomposition effect for increasing the cooling efficiency

SOURCE: Issledovaniye teploobmena v potokakh zhidkosti i gaza (Investigation of heat exchange in liquid and gas flows). Moscow, Izd-vo Mashinostroyeniye, 1965, 3-28

TOPIC TAGS: coolant, endothermic decomposition, coolant decomposition, heat exchange, cooling efficiency, energy storage capacity

ABSTRACT: Heat exchange processes can be accelerated not only by the use of endothermic phase transitions but also by means of additional endothermic reactions within the coolant. In view of the absence of appropriate data which could influence the choice of the best coolants with optimal cooling decomposition effects, the authors carried out theoretical analyses and approximate evaluations of the energy storage capacity of various dissociating coolants, and determined such capacities experimentally within a given temperature range during heat exchanges between the wall and a moving coolant. The results of this thorough study show

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ACCESSION NR: AT5010479

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that methyl and ethyl alcohols, ethylene glycol, lithium hydride, lithium ammoniate, ammonium fluoride, and acetic, oxalic, and formic acid exhibit the largest specific energy-storing capacity while ammonia, pentane, isopentane, and air proved to be unsuitable. In spite of the large enthalpy of hydrogen, it can hardly be used as a coolant in mobile devices because its low density makes the use of large reservoirs mandatory. The best are ammonium acetate, a 70% aqueous solution of methyl alcohol, and pure ammonium bicarbonate; all other coolants are close to water vapor. All coolants with the exception of pure ammonium bicarbonate and its 20% aqueous solution leave solid deposits. Orig. art. has: 26 formulas, 17 figures, and 3 tables.

ASSOCIATION: None

SUBMITTED: 11Dec64 ENCL: 00 SUB CODE: TD

NO REF SOV: 005 OTHER: 003

Card 2/2

L 52507-65 EWT(1)/EPF(c)/EPF(n)-2/EWG(m)/EPR Pr-4/Ps-4/Pu-4 WW/GS
ACCESSION NR: AT5010486 UR/0009/65/000/000/0137/0152

AUTHOR: Koshkin, V. K. (Doctor of technical sciences); Volkova, A. F. (Engineer); Tarkhanovskiy, V. A. (Engineer)

TITLE: Heat exchange during boiling in narrow slit-like channels

30
B+1

21

SOURCE: Issledovaniye teploobmena v potokakh zhidkosti i gaza (Investigation of heat exchange in liquid and gas flows). Moscow, Izd-vo Mashinostroyeniye, 1965, 137-152

TOPIC TAGS: heat transfer theory, slit channel heat exchange, phase transition heat exchange, distilled water coolant heat transfer coefficient, vacuum heat exchange, lubricating oil cooling

ABSTRACT: Heat exchange devices often utilize phase transitions of the cooling agent. The present authors investigated the heat exchange processes in a vacuum in an evaporation-type radiator consisting of flat slit-like channels. Distilled water served as a coolant for cooling the lubricating oil of an engine. A general theoretical outline of the problem is followed by a formulation of the experimental task, a description of the experimental setup, an exposition of the experimental methods, and a comprehensive analysis of the experimental results. The paper presents, among other data, the first known values of the coefficient $\alpha_2$ of heat transfer from wall to water boiling in a vacuum during natural convection within the vertical slip-like channel; $\alpha_2$ is also presented

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L 52507-65

ACCESSION NR: AT5010486

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as a function of the saturation pressure, cooled liquid forced convection velocity, Reynolds number, and heat flow. Further experiments are needed to improve the existing, none too accurate, preliminary data and for the accumulation of further necessary information. Orig. art. has: 11 formulas and 12 figures.

ASSOCIATION: none

SUBMITTED: 11Dec64 ENCL: 00 SUB CODE: TD, FR

NO REF SOV: 009 OTHER: 000

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9.4300 (1150)
24.7700 1143, 1160, 1155

S/020/61/137/001/011/021
B104/B209

AUTHORS: Palatnik, L. S., Komnik, Yu. F., Koshkin, V. M., and Belova, Ye. K.

TITLE: A group of ternary semiconducting compounds

PERIODICAL: Doklady Akademii nauk SSSR, v. 137, no. 1, 1961, 68-71

TEXT: In the introduction, the authors show that in the choice of new multi-component semiconducting compounds one must use not only chemical criteria but has also to consider the thermodynamic stability of the compound concerned. The authors synthetized a series of alloys of the type of the ternary compound $B_2^IB^{IV}B_3^{VI}$. Here, $B^I$ = Cu, $B^{IV}$ = Ge, Sn, Pb, and $B^{VI}$ = S, Se, Te. X-ray photographs show that all these compounds except that with Pb, form diamond-type crystals. From the "structural" lines of the X-ray photographs, the authors determined the lattice parameters which are compiled in Table 1. Beside these "structural" lines, also "superstructural" lines were found. The hkl indices of these lines

X

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20319

are all even numbers, and their sum is $h_i = \sum 4n + 2$ (n = 0, 1, 2). These values are listed in Table 1, too. It is noted that S, Se, and Te form an anion subgroup of the compound and a sublattice. Cu, Sn, and Ge atoms form an analogous cation sublattice. When the differences in the atomic factors of anion and cation are great, the "superstructural" lines were stronger than in the case of a slight difference. It was further found that the substitution S ⟶ Se ⟶ Te causes a regular increase in the lattice parameter. Similar changes, but to a lesser degree, were observed when Ge was substituted by Sn. The authors conclude from the ratios of the ionic radii shown in Table 2 that the $Ge^{4+}$ and $Sn^{4+}$ cations form tetrahedrons with all anions concerned ($S^{2-}$, $Se^{2-}$, $Te^{2-}$). It is improbable that the $Pb^{4+}$ cation forms a tetrahedron with these anions since strong structural stresses would arise. This crystallochemical representation thus proves the above results of the authors to be true. On the basis of these results, the lattice parameters are calculated according to the formula

X

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A group of ternary...

S/020/61/137/001/011/021
B104/B209

$$a_{\text{calc.}} = \frac{8}{\sqrt{3}} \frac{\bar{d}}{2} \simeq \frac{8}{\sqrt{3}} \bar{r} \quad (1).$$

Therein, $\bar{d}$ denotes the mean distance between the connections of anion and cation in the anion- (and cation-) tetrahedron, $\bar{r}$ - the mean atomic radius in the lattice of the examined ternary compounds. Results are shown in Table 1. Moreover, the ternary compounds studied here turned out to be semiconductors. Finally, it is shown that in the synthesis of new semiconducting compounds, attempts should be made to obtain compounds with the electron structure of the above-described compounds. The shape of the Brillouin zones is conserved if the lattice structure of the new compounds is the same; and if the concentration of the valency electrons is the same, the position of the Fermi levels is conserved, too. Since both factors determine the semiconducting properties of a compound, the semiconducting properties of new compounds will depend on the degree of ionicity of the new compound. There are 1 figure, 3 tables, and 6 references: 4 Soviet-bloc and 2 non-Soviet-bloc.

ASSOCIATION: Khar'kovskiy gosudarstvennyy universitet im. A. M. Gor'kogo (Khar'kov State University imeni A. M. Gor'kiy).

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20319

A group of ternary...

S/020/61/137/001/011/021
B104/B209

Nauchno-issledovatel'skiy institut osnovnoy khimii Khar'kov (Scientific Research Institute of Basic Chemistry, Khar'kov)

PRESENTED: December 2, 1960, by S. A. Bekshinskiy, Academician

SUBMITTED: November 26, 1960

Legend to Table 1:
1) Lattice parameter, A;
1a) calculated with (1),
1b) experimental;
2) error, %; 3) observed weak "superstructural" lines.

Table 1

| Соединения | 1 Параметр решетки, А |  | 2 Погрешность Δ, % | 3 Наблюдаемые (слаб.) сверхструктурные линии $\Sigma h_i^2$ |
|---|---|---|---|---|
|  | a $a_{\text{выч}}$ | b $a_{\text{эксп}}$ |  |  |
| $Cu_2GeS_3$ | 5,30 | 5,30 | — | 4,12,36,44 |
| $Cu_2SnS_3$ | 5,44 | 5,43 | −0,2 | 4,12,20,36,44 |
| $Cu_2GeSe_3$ | 5,52 | 5,55 | +0,5 | 44 |
| $Cu_2SnSe_3$ | 5,65 | 5,68 | +0,5 | 4,44 |
| $Cu_2GeTe_3$ | 5,97 | 5,95 | −0,3 | 4,12,20,36,<br>44,52 |
| $Cu_2SnTe_3$ | 6,11 | 6,04 | −1,1 | 4,12,44 |

Table 2

| 1 Ионы | $r_к$, A | $S^{2-}$ | $Se^{2-}$ | $Te^{2-}$ |
|---|---|---|---|---|
|  |  | $r_a$, A |  |  |
|  |  | 1,74 | 1,91 | 2,03 |
| $Ge^{4+}$ | 0,44 | 0,25 | 0,23 | 0,22 |
| $Sn^{4+}$ | 0,74 | 0,42 | 0,39 | 0,38 |
| $Pb^{4+}$ | 0,84 | 0,48 | 0,44 | 0,41 |

Legend to Table 2: 1) Ions

38909
S/181/62/004/006/007/051
B125/B104

26.2532

**AUTHORS:** Palatnik, L. S., Koshkin, V. M., Gal'chinetskiy, L. P., Kolesnikov, V. I., and Komnik, Yu. F.

**TITLE:** Some properties of semiconducting compounds of the type $A_2^I B^{IV} X_3^{VI}$

**PERIODICAL:** Fizika tverdogo tela, v. 4, no. 6, 1962, 1430 - 1431

**TEXT:** This paper deals with the conductivity and thermo-emf of compounds with the general formula $A_2^I B^{IV} X_3^{VI}$ ($A^I$ = Cu, $B^{IV}$ = Ge or Sn, $X^{VI}$ = S, Se, or Te). Most of these compounds have covalent bonds. Samples were molten in evacuated quartz ampoules and purified by zone refining in 12 to 16 operations. Compounds based on sulfur and selenium can be purified by zone refining more easily than compounds based on tellurium. The values of the conductivity $\sigma$ ($ohm^{-1}cm^{-1}$) and of the thermo-emf $\alpha$ ($\mu v$/deg) at room temperature are as follows:

X

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S/181/62/004/006/007/051
B125/B104

Some properties of semiconducting...

SUBMITTED: December 22, 1961

Card 3/3

S/181/62/004/009/008/045
B108/B186

AUTHORS: Palatnik, L. S., Koshkin, V. M., and Gal'chinetskiy L. P.

TITLE: The mechanism of ordering in three-component semiconducting compounds

PERIODICAL: Fizika tverdogo tela, v. 4, no. 9, 1962, 2365 - 2371

TEXT: Ordering in multi-component semiconductors can considerably influence the electronic properties. The microscopic reasons for this phenomenon in a three-component semiconductor are elucidated. One of the three types of atom ("anions") in this covalent type of semiconductor differs from the other two ("cations") as regards chemical properties. Ordering in the cation sublattice is not, however, associated with the covalent forces. The small contribution of ionic bonds is responsible for ordering. This is in accordance with the theory of Hume-Rothery (Struktura metallov i splavov, GNTIzdat po chernoy i tsvetnoy metallurgii - The structure of metals and alloys, GNTIzdat for ferrous and non-ferrous metallurgy - M., 1958) who attributed ordering to the differing size of the atoms in the individual components. Experimental data on more than 30 three-component
Card 1/2

S/070/62/007/001/014/022
E032/E314

AUTHORS: Palatnik, L.S., Koshkin, V.M. and Komnik, Yu.F.

TITLE: Isoelectronic series of semiconducting compounds

PERIODICAL: Kristallografiya, v.7, no. 1, 1962, 124 - 125

TEXT: The authors review published information in order to establish whether Goldschmidt's rule (Ref. 1 - Uspekhi fiz. nauk, 9, 6, 811, 1929), which was originally formulated for compounds AB with diamond-type lattices (where A and B belong to the same half-periods in the periodic table), also holds for tertiary semiconducting compounds with diamond lattices. The results are summarized in the table. As can be seen, Goldschmidt's rule does hold and the authors expect that it will also hold in four-component compounds such as, for example $Cu_3AsSe_4$, $CuGe_2As_3$, $CuZnGaSe_4$, $Cu_2ZnGeSe_4$, $Cu_3ZnGaGeSe_6$, which should have lattice constants practically equal to 5.65 A. In $Ag_2SnTe_3$, $CdSnSb_2$, $AgInSnSb_4$ and $CdInSnSb_3$ the lattice constants should be 6.46 Å. The rule may even apply to n-component semiconductor compounds with diamond lattices.

Card 1/2

Isoelectronic series of ....

S/070/62/007/001/014/022
E032/E314

There are 1 table and 11 references: 8 Soviet-bloc and 3 non-Soviet-bloc. The 2 English-language references mentioned are: Ref. 4 - H. Pfister - Acta crystallogr., 11, 221, 1958; Ref. 10 - C.H.L. Goodman - J. Phys. Chem. Solids, 6, 305, 1958.

ASSOCIATIONS: Khar'kovskiy nauchno-issledovatel'skiy institut osnovnoy khimii (Khar'kov Scientific Research Institute of Basic Chemistry)
Khar'kovskiy gosudarstvennyy universitet im. A.M. Gor'kogo (Khar'kov State University im. A.M. Gor'kiy)

SUBMITTED: May 26, 1961

✓

Card 2/3

PALATNIK, L.S.; KOSHKIN, V.M.; KOMNIK, Yu.F.

Isoelectronic series of semiconductor compounds. Kristallografiia 7 no.1:124-125 Ja-F '62. (MIRA 15:2)

1. Khar'kovskiy nauchno-issledovatel'skiy institut osnovnoy khimii i Khar'kovskiy gosudarstvennyy universitet im. A.M. Gor'kogo.

(Periodic law)
(Semiconductors)

PALATNIK, L.S.; KOMNIK, Yu.F.; KOSHKIN, V.M.

Crystal chemistry of compounds with a tetrahedral coordination of atoms. Kristallografiia 7 no.4:563-567 Jl-Ag '62. (MIRA 15:11)

1. Khar'kovskiy gosudarstvennyy universitet imeni A.M.Gor'kogo i nauchno-issledovatel'skiy institut osnovnoy khimii.
(Crystallography)

PALATNIK, L.S.; KOSHKIN, V.M.; GAL'CHINETSKIY, L.P.; KOLESNIKOV, V.I.;
KOMNIK, Yu.F.

Some properties of semiconductor compounds of the type $A_2^{1}B^{IV}X_3^{VI}$.
Fiz. tver. tela 4 no.6:1430-1431 Je '62. (MIRA 16:5)

1. Nauchno-issledovatel'skiy institut osnovnoy khimii, Khar'kov.
(Semiconductors)

PALATNIK, L.S.; KOSHKIN, V.M.; GAL'CHINETSKIY, L.P.

Ordering mechanism in ternary semiconductor compounds. Fiz. tver. tela 4 no.9:2365-2371 S '62. (MIRA 15:9)

1. Khar'kovskiy politekhnicheskiy institut imeni V.I.Lenina.
(Semiconductors) (Crystal lattices)

X-Ray investigation of the structure of alloys in the system $CuGaSe_2$-$Ga_2Se_3$. L. S. Palatnik, Yu. F. Komnik, Ye. K. Belova.

Electrical and optical properties of alloys in the system $CuGaSe_2$-$Ga_2Se_3$. V. M. Koshkin, L. G. Manyukova, Yu. F. Komnik, L. S. Palatnik.

X-Ray investigation of the system $CuInSe_2$-$In_2Se_3$. L. S. Palatnik, Yu. F. Komnik, E. I. Rogacheva, L. V. Atroshchenko.

Electrical properties of alloys in the system $CuInSe_2$-$In_2Se_3$. L. S. Palatnik, V. M. Koshkin, Yu. F. Komnik, L. N. Gal'chinetskiy, L. G. Manyukova.

Report presented at the 3rd National Conference on Semiconductor Compounds, Kishinev, 16-21 Sept 1963

PALATNIK, L.S.; KOMNIK, Yu.F.; KOSHKIN, V.M.; GAL'CHINETSKIY, L.P.
[Hal'chynets'kyi, L.P.]; MANYUKOVA, L.G. [Maniukova, L.H.]

Electric properties of alloys in the system $CuInSe_2$--$In_2Se_3$.
Ukr. fiz. zhur. 9 no.9:962-972 S '64.
(MIRA 17:11)

1. Nauchno-issledovatel'skiy institut osnovnoy khimii, Khar'kov.

L 23520-65 EWA(h)/EWG(k)/EWP(j)/EWT(1)/EWT(m)/EWP(b)/T/EWP(t) Pc-4/Pz-6/
Peb IJP(c) AT/RM/JD

ACCESSION NR: AP4045661 S/0185/64/009/009/0973/0982

3

B

AUTHOR: Koshkin, V. M.

TITLE: Characteristics of the structure and of the physical properties of semiconductors with a chalcopyrite lattice

SOURCE: Ukrayins'ky*y fizy*chny*y zhurnal, v. 9, no. 9, 1964, 973-982

TOPIC TAGS: semiconductor, chalcopyrite lattice, multicomponent diamond type semiconductor, semiconductor lattice distortion, covalent bond, ionic bond

ABSTRACT: The author shows that the ordering of atoms of various sizes in the cation sublattice of a multicomponent diamond-like semiconductor results in a distortion of the covalent bonds. This manifests itself in a distortion of the structure and a redistribution of the contribution of the ionic and the covalent binding components. These conclusions are confirmed by the comparison of the numerous experimental data concerning the crystalline structure, the melting temperatures, and the widths of the forbidden bonds of the compounds of the $A^{I}B_{2}^{III}C_{2}^{VI}$ type

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L 23520-65
ACCESSION NR: AP4046661

4

with a chalcopyrite lattice, and the solid solutions based on them where the degree of ordering gradually diminishes. "The author is grateful to L. S. Palatnik, Yu. F. Komnik, and D. P. Belozorov for advice and discussions." Orig. art. has: 2 figures and 1 table

ASSOCIATION: Naykovo-doslidnyy instytut osnovnoyi khimiyi, Kharkiv (Research Institute for General Chemistry)

SUBMITTED: 18Dec63 ENCL: 00

SUB CODE: SS, EC NO REF SOV: 009 OTHER: 008

Card 2/2

KOSHKIN, V.M.

Optical width of the forbidden zone in the systems $CuGaSe_2$--$Ga_2Se_3$ and $CuInSe_2$--$In_2Se_3$. Ukr. fiz. zhur. 9 no.9:1038-1040 S '64. (MIRA 17:11)

1. Nauchno-issledovatel'skiy institut osnovnoy khimii, Khar'kov.

ATROSHCHENKO, L.V.; GAL'CHINETSKIY, L.P.; KOSHKIN, V.M.; PALATNIK, L.S.

Deviations from stoichiometry and dissolution of impurities in semiconductor compounds of the $B_2^{III} C_3^{VI}$ type. Izv. AN SSSR. Neorg. mat. 1 no.12:2140-2150 D '65. (MIRA 18:12)

1. Nauchno-issledovatel'skiy institut osnovnoy khimii, Khar'kov, i Khar'kovskiy politekhnicheskiy institut im. V.I. Lenina. Submitted May 31, 1965.

L 51532-65 EWT(1)/EWT(m)/EWP(w)/EWG(m)/EWA(d)/T/EWP(t)/EWP(b)/EWA(h)
Pz-6/Peb IJP(c) RDW/JD/JT UR/0021/65/000/004/0464/0468
ACCESSION NR: AP5010787

49 47 B

AUTHOR: Palatnik, L. S.; Komnik, Yu. F.; Koshkin, V. M.; Gal'chynets'kyy, L. P. (Gal'chinetskiy, L. P.); Manyukova, L. K. (Manyukova, L. G.)

TITLE: Electrical and optical properties of alloys of the $CuInSe_2$-$In_2Se_3$ system

18 27

SOURCE: AN UkrRSR. Dopovidi, no. 4, 1965, 464-468

21

TOPIC TAGS: copper alloy, indium alloy, semiconductor, lattice defect, carrier mobility, thermal emf, electric conductivity

27 27

ABSTRACT: The authors investigated the electrical and some optical properties of n-type semiconductors of the system $CuInSe_2$-$In_2Se_3$. The results show that the electric conductivity decreases with increasing content of lattice defects in the alloy, while the thermal emf increases. When the $In_2Se_3$ content exceeds 66%, the electric conductivity increases abruptly, and the thermal emf decreases abruptly. The carrier density, the electron mobility, and the Hall mobility all decrease with increasing content of $In_2Se_3$. The width of the forbidden band has a minimum near about 30% $In_2Se_3$. It is concluded that impurity conductivity is produced in many

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ACCESSION NR: AP5010787

2

alloys in spite of the high content of lattice imperfections, and that the decrease in the carrier density begins as soon as a small concentration of stoichiometric defects appears. The suppression of the electric activity of the impurities is attributed to the penetration of the impurity atoms either into the vacant sites of the cation sublattice or into octahedral voids, or into tetrahedral voids of a different type. Depending on the dimensions of the atom, these impurities can either be neutral or ionized, and their electric activity suppressed. This report was presented by V. Ye. Lashkar'ov (V. Ye. Lashkarev). Orig. art. has: 2 figures.

ASSOCIATION: Kharkivs'kyy politekhnichnyy institut [Khar'kovskiy politekhnicheskiy institut] (Khar'kov Polytechnic Institute); N.-d. instytut osnovnoyi khimiyi [N.-i. institut osnovnoy khimii] (Scientific Research Institute of Basic Chemistry)

SUBMITTED: 28Feb64 ENCL: 00 SUB CODE: ES, MM

NR REF SOV: 010 OTHER: 005

Card 2/2

L 1735-66 EWT(l)/EWT(m)/ETC/EWG(m)/T/EWP(t)/EWP(b)/EWA(h)/EW^A(c) IJP(c)
RDW/JD/JG/AT

ACCESSION NR: AP5016477 UR/0021/65/000/006/0731/0734

546B

AUTHORS: Palatnik, L. S.; Koshkin, V. M. 44,55 44,55

TITLE: The effect of ordering on the physical properties of multicomponent semiconductors 21,44,55

SOURCE: AN UkrRSR. Dopovidi, no. 6, 1965, 731-734

TOPIC TAGS: semiconductor alloy, crystal lattice structure, melting point, forbidden band, solid solution

ABSTRACT: In distorted tetragonal chalcopyrite crystals the $sp^3$ hybrid states do not give maximum overlap and therefore the bond energy is smaller than in the same crystals with a disordered cubic lattice. This leads in the overwhelmingly covalent crystals which are being considered to an appreciable energy decrease of the crystal and a depression of its melting point. A table comparing $AgB^{III}C_2^{IV}$ (very large distortion) and $CuB^{III}C_2^{IV}$ (small distortion) melting points

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L 1735-66

ACCESSION NR: AP5016477

13

shows that the melting points of the former are indeed much lower. The table also shows that compounds with considerably lower energy of covalent interaction, resulting from the distortion, have broader forbidden bands than the corresponding compounds with small distortion. The ordering effects should also be observable in other multicomponent systems; they have been observed in alloys and compounds containing stochiometric defects and in certain solid solutions. The authors observed increases in the width of the forbidden zone of annealed alloys of the CuGaSe$_2$ -- Ga$_2$Se$_3$ system. It is concluded that experiments confirm that inter-cation ordering in multicomponent diamond-like semiconductors gives rise to appreciable changes of their characteristics. This report was presented by S. I. Pekar. Orig. art. has: 1 table and 1 figure.

44,55

ASSOCIATION: Kharkivs'kyy politekhnichnyy instytut [Khar'kovskiy politekhnicheskiy institut] (Khar'kov Polytechnic Institute); 44,55 N.-d. instytut osnovnoyi khimiyi [N.-i. institut osnovnoy khimii] (Scientific Research Institute of Basic Chemistry)

44,55

Card 2/3

EWG(m)
L 14855-66 EWT(m)/ETC(f)/EWP(b)/EWP(t) IJP(c) RDW/JD

ACC NR: AP6001727 SOURCE CODE: UR/0020/65/165/004/0809/0812

AUTHORS: Palatnik, L. S.; Atroshchenko, L. B.; Gal'chinetskiy, L. P.; Koshkin, V. M.

59
B

ORG: Khar'kov Polytechnic Institute im. V. I. Lenin (Kar'kovskiy politekhnicheskiy institut)

TITLE: On the effect of deviation from stoichiometry in the semiconductor $In_2Te_3$

SOURCE: AN SSSR. Doklady, v. 165, no. 4, 1965, 809-812

TOPIC TAGS: stoichiometry, indium compound, telluride, resistivity, thermoelectric power, hardness, impurity conductivity

ABSTRACT: The authors have studied the deviations from stoichiometry in compounds of the type $A_2^{III}V_3^{VI}$ using $In_2Te_3$ as an example. The alloys were synthesized by a standard technique in sealed quartz ampoules. From a study of the phase diagram and from the analysis of the resistivity, hardness, and thermoelectric power of the compound it

Card 1/2 UDC: 621.315.592.9:532.739.2:539.219.1:541.412

L 14855-66

ACC NR: AP6001727

is deduced that a solid solution based on the $In_2Te_3$ compound is a variable-composition phase, the region of existence of which is shifted somewhat from stoichiometric towards an excess of In. The resistivity changes within the single-phase region by less than one order of magnitude. Deviations from stoichiometry do not give rise to impurity conductivity. Various possible crystal-chemical mechanisms of the solution of impurity and super-stoichiometric atoms in compounds of the $A_2^{III}B_3^{VI}$ are discussed. It is concluded that the observed deviation from stoichiometry in $In_2Te_3$ is connected not with formation of vacancies, as in other semiconductor compounds, but with intrusion of superstoichiometric atoms in the non-ionized state. This report was presented by Academician S. A. Vekshinskiy. Orig. art. has: 2 figures.

SUB CODE: 20/ SUBM DATE: 17Apr65/ ORIG REF: 011/ OTH REF: 005

Card 2/2

L 22284-66 EWT(m)/ETC(f)/EWG(m)/EWP(t) IJP(c) RDW/JD

ACC NR: AP6007266 UR/0363/66/002/002/0405/0406

AUTHOR: Atroshchenko, L.V.; Koshkin, V.M.

30
B

ORG: Khar'kov Scientific Research Institute for Basic Chemistry (Nauchno-issledovatel'skiy institut osnovnoy khimii)

TITLE: Solubility of impurities in $In_2Te_3$

TOPIC TAGS: indium containing alloy, tellurium containing alloy, solubility, solid solution, bismuth, antimony

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v.2, no.2, 1966, 405-406

ABSTRACT: The article reports the results of a study of the solubility of bismuth and antimony impurities in $In_2Te_3$ compounds. The limit of the solubility of the impurities was evaluated by data from a metallographic analysis and from the isotherms for the microhardness of the corresponding alloys. The maximum solubility of bismuth and antimony in the alpha phase of $In_2Te_3$ was determined. The specific solubility of bismuth in $In_2Te_3$ is 0.1 atom% which, calculated on the number of bismuth atoms entering into one molecular unit of $In_2Te_3$, yields the formula $In_2(Bi_{0.0001})Te_3$. The specific solubility of antimony in $In_2Te_3$ is 1.63 atom %, or $In_2(Sb_{0.0163})Te_3$. In further experiments, the specific

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UDC: 546.682'241.

ACC NR: AP6007266

O

solubility of antimony was determined in an alloy with the formula $In_2(In_{0.005})Te_3$. If the atoms of antimony and the atoms of indium above the stoichiometric number occupy exactly the same position, the solubility of antimony in this alloy should be less than in $In_2Te_3$. This was observed experimentally: for the alloy $In_2(In_{0.005})Te_3$, the maximum solubility of antimony was 0.0127 instead of 0.0163 for $In_2Te_3$. Orig. art. has: none.

SUB CODE: 11/ SUBM DATE: 27Jul65/ ORIG REF: 003/

Card 2/2 net

L 06487-67 EWT(m)/EWP(t)/ETI IJP(c) JD

ACC NR: AP6028299 SOURCE CODE: UR/0363/66/002/006/1031/1037

AUTHOR: Palatnik, L. S.; Manyukova, L. G.; Koshkin, V. M. 56 13

ORG: Scientific Research Institute of Basic Chemistry (Nauchno-issledovatel'skiy institut osnovnoy khimii); Kharkov Polytechnic Institute im. V. I. Lenin (Khar'kovskiy politekhnicheskiy institut)

TITLE: Electric properties of alloys in the $CuGaSe_2-Ga_2Se_3$ system

16 27 27 27

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 2, no. 6, 1966, 1031-1037

TOPIC TAGS: selenide, copper compound, gallium compound, selenium compound, semiconductor alloy, thermal emf, forbidden zone width, semiconductor conductivity

ABSTRACT: The paper continues the study of the semiconductor systems $A^{I}B^{III}C_2^{IV}$ (chalcopyrites) - $B_2^{III}C_3^{VI}$ (compounds with a sphalerite lattice), which contain broad regions of solid solutions with a diamondlike lattice in which the concentration of stoichiometric vacancies changes monotonically. Some physical properties (optical width of the forbidden gap $\Delta\epsilon$, electric conductivity $\sigma$ and thermal emf $\alpha$) of furnace-cooled alloys of one such system, $CuGaSe_2-Ga_2Se_3$, were measured. As in the $CuInSe_2-In_2Se_3$ system studied earlier, the conductivity decreases even at low $Ga_2Se_3$ concentrations, and $\Delta\epsilon$ remains practically unchanged in the existence domain of the chalcopyrite phase and changes very rapidly in the region of the sphalerite structure. The

Card 1/2 UDC: 546.681.231:537.311.33

L 06487-67

ACC NR: AP6028299

effect of increase in $\Delta\epsilon$ during ordering annealing was observed on some alloys with stoichiometric defects. Both the concentration ordering and thermal ordering of the crystal of a multicomponent semiconductor increase $\Delta\epsilon$. The observed influence of the light and thermal conditions of the history of the sample on the magnitude of the thermal emf is thought to be due to the presence of a considerable number of electron traps. The concentration of free charge carriers was estimated from the thermal emf. It is concluded that the decrease in the concentration of impurity carriers is due to the specific property of semiconductors with a defect lattice of depressing the electric activity of impurities. Orig. art. has: 5 figures and 3 formulas.

SUB CODE: 11,20/ SUBM DATE: 04Jul65/ ORIG REF: 014/ OTH REF: 003

Card 2/2 mes

KOSHKIN, Vasiliy Nikolayevich

[Struggle of the Communist Party of the Soviet Union for the consolidation and further development of the general economy of collective farms from 1953 to 1957] Bor'ba Kommunisticheskoi partii Sovetskogo Soiuza za ukreplenie i dal'neishee razvitie obshchestvennogo khoziaistva kolkhozov, 1953-1957 gg. M, Znanie, 1958. 47 p.(Vsesoiuznoe obshchestvo po rasprostraneniiu politicheskikh i nauchnykh znanii, Ser. I, 11) (MIRA 11:10)

(Collective farms)

[illegible], V. V.

Moose

Moose in the Ul'ianovsk province, Priroda, 41, no. 1, 1952.

Monthly List of Russian Accessions, Library of Congress, May [illegible]. Unclassified.

USSR / General Biology. General Hydrobiology. B

Abs Jour : Ref Zhur - Biol., No 19, 1958, No 85680

Author : Koshkin, V. V.
Inst : Kostroma Pedag. Inst.
Title : Argillotrophic Lakes in the Vicinity of Kazan, Tatar ASSR.

Orig Pub : Uch. zap. Kostromsk. ped. in-ta, 1957, No. 2, 192-233.

Abstract : A study was conducted on 2 eutrophic lakes (Raifa and Glubokoye) referred to as argillotrophic lakes with respect to the presence in the water of large quantities of argillaceous suspensions. A general description of the lakes and the soil characteristics of the adjoining districts are given. A study was made of the effect of argillaceous suspensions on the hydrological conditions, the chemical composition of water,

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(Weirs) (Irrigation)

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(Chingiz-Tau--Geology, Stratigraphic)

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NAMI-State Sci Res Order of the Labor Red Banner Automobile and Automotive Inst.

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(Tuva A.S.S.R.—Trematoda)
(Tuva A.S.S.R.—Parasites—Anseriformes)

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1. Nauchnyye rukovoditeli starshiy prepodavatel' O.A. Kosyakina i dotsent A.N. Ivanov.
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MARKOV, D.A.; KOT, V.I.; KOSHKINA, N.I.

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KONOKOTINA, A.G.; KOSHKINA, R.I.; KOMERS, G.I.

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1. Kafedra mikrobiologii (zav. prof. Kiselev, P.N.) Leningradskogo khimiko-farmatsevticheskogo instituta.
(LACTIC ACID BACTERIA)

KOSHKINA, S.I., dotsent

Functional condition of the liver in late pregnancy toxemias.
Akush.i gin. 37 no.2:16-19 F '61. (MIRA 14:3)

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Aleksandrov) Yaroslavskogo meditsinskogo instituta.
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KOSHKINA, S.I., dotsent; MAKAROV, K.S., dotsent.

Lipoproteins in the blood serum in physiological pregnancy and toxicoses. Vop.okh.mat.i det. 7 no.12:50-52 D'62. (MIRA 16:7)

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(LIPOPROTEINS) (PREGNANCY) (TOXEMIA)

ACC NR: AP6036363 SOURCE CODE: UR/0387/66/000/011/0115/0121

AUTHOR: Khalevin, N. I.; Koshkina, T. M.

ORG: Ural Branch, Institute of Geophysics, Academy of Sciences SSSR (Ural'skiy filial Institut geofiziki Akademiya nauk SSSR)

TITLE: Quasi-anisotropy of the elastic properties of some rocks from the Ural region

SOURCE: AN SSSR. Izvestiya. Fizika Zemli, no. 11, 1966, 115-121

TOPIC TAGS: rock mechanics, rock elasticity, seismic wave propagation, petrographic analysis, elastic wave propagation

ABSTRACT: In order to improve methods of interpreting seismic data, the Institute of Geophysics of the Ural Branch of the USSR Academy of Sciences conducted rock-elasticity investigations using the IPA-59 and UZS-2 seismoscopes to measure ultrasonic wave velocities in rock samples from the Ural region. During the experiments cases of anisotropy or quasi-anisotropy were noted in which the velocities were observed to differ considerably depending upon wave incidence and direction of transmission. To ascertain the cause of this phenomenon, petrographic analyses were made of three major rock groups: 1) rocks with a schistose texture and a lepidoblastic or granoblastic structure; 2) rocks with a schistose texture and a fibrogranoblastic and porphyroblastic structure; and 3) rocks with a massive texture and a heteroblastic,

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ACC NR: AP6036363

granoblastic, blastogranitic, or blastopsammitic structure. Rocks of group 1 were characterized by the greatest anomalies in velocity anisotropy. Velocities along the plane of schisotosity (average 4340 m/sec) were 3—5 times greater than transverse waves. In the case of rocks of group 2, elastic-wave propagation velocity along the plane of shcistosity (average 5400 m/sec) was about twice that of transverse waves. In the case of group 3, velocity anisotropy did not exceed 30%, and the average wave velocity is 4700 m/sec. Thus, the propagation velocity of ultrasonic longitudinal elastic waves was found to be greatly dependent on the texture and structure of the particular rock and on the quantitative ratio of mineral grains of different forms (isometric, lamellar, prismatic). Orig. art. has: 5 figures.

SUB CODE: 08/ SUBM DATE: 08Jul65/ ORIG REF: 002/ ATD PRESS: 5108

Card 2/2

KOSHKINA, T.V.; KHALANSKIY, A.S.

Burrows and refuges of the Norwegian lemming (Lemmus lemmus).
Biul. MOIP. Otd. biol. 68 no.1:16-24 Ja-F '63. (MIRA 17:4)

KOSHKINA, T. V.

Dissertation: "Comparative Ecology of the Red-Haired Vole (Ryzhaya Polevka) in the Northern Tayga." Cand Biol Sci, Inst of Zoology, Acad Sci USSR, Moscow, Oct-Dec 53. (Vestnik Akademii Nauk, Moscow, Jun 54)

SO: SUM 318, 23 Dec 1954

**KOSHKINA, T.V.**

Method for determining the age of bank voles and its application.
Zool.zhur. 34 no.3:613-639 My-Je '55. (MLRA 8:8)

1. Kandalakshskiy gosudarstvennyy zapovednik.
(Field mice)

KOSHKINA,T.V.

Protection of nature on the Kola Peninsula (eider and extensive bird nesting grounds) Biul.MOIP. Otd biol. 60 no.4:124-125 Jl-Ag '55.

(KOLA PENINSULA--BIRDS, PROTECTION OF) (MLRA 8:12)

KOSHKINA, T.V.

Changes in the fauna of drying up oak forests and the role of insectivorous birds in the life of these forests. Mat.k pozn.fauny i flory SSSR. Otd.zool. no.35:166-216 '56. (MLRA 10:5)

(Forest fauna)
(Oak)

KOSHKINA, T. V.

**"Natural Foci Human Diseases Under Transpolar Conditions,"** by Lt Col Med Serv L.N.Troparev, Candidate of Biological Sciences T.V.Koshkina, Maj Med Serv N.N.Gol'dburg, and Maj Med Serv P.I.Fridman, Voyenno-Meditsinskiy Zhurnal, No 3, Mar 57, pp 54-57

This work describes outbreaks of natural foci human diseases, i.e., six cases of hemorrhagic nephroso-nephritis, confirmed by post mortem examination of one of the patients at the Chair of Pathological Anatomy, Military-Medical Academy imeni S. M. Kirov by Lt Col Med Serv V.G. Chudakov; and 17 cases of tularemia, confirmed by positive agglutination titers with tularemia diagnosticums at dilutions of 1:1,600.

The authors discuss the types of fleas, ticks, and mites and the various rodents found in the area where the tularemia outbreak occurred. The clinical manifestations of the disease pointed to a water-borne etiology of the disease. It is stated that the lemming population had reached a peak just before the outbreak of the disease and that a natural epizootic had depleted their numbers. Lemming corpses were frequently found along the banks of the stream from which the infected persons had drawn their drinking water. It is surmised that the animals died of tularemia, that they had contaminated the stream, and that the human cases were contracted by drinking unboiled water from the stream. No animal reservoir was discovered. (U)

Sum IN 1451

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(KOLA PENINSULA—LEMMINGS)